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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/731,220

12/09/2003

Michael J. Sailor

0321.68542

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04/26/2006

GREER, BURNS & CRAIN  
300 S WACKER DR  
25TH FLOOR  
CHICAGO, IL 60606

EXAMINER

GELLNER, JEFFREY L

ART UNIT

PAPER NUMBER

3643

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/731,220

Applicant(s)

SAILOR ET AL.

Examiner

Jeffrey L. Gellner

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12, 14, 15 and 17-28 is/are pending in the application.
- 4a) Of the above claim(s) 4-7, 10, 12, 27 and 28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 15 and 17-26 is/are allowed.
- 6) ☒ Claim(s) 1-3, 8, 9 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 25 February 2005.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

Acknowledgement is made of Applicants' IDS received 25 February 2005.

#### ***Election/Restrictions***

Applicant's election with traverse of Species combination method of detecting a target analyte, nitrate salt, and thin film nanocrystal silicon - in the reply filed on 26 October 2005 is acknowledged. The traversal is on the ground(s) that the Examiner has failed to provide a *prima facie* case of serious burden (Response to notice of non-compliant amendment, page 2). This is not found persuasive because the different species require different fields of search (see MPEP 808.02).

The requirement is still deemed proper and is therefore made FINAL. Claims 4-7, 10, 12, 27, and 28 are withdrawn from examination because they are drawn to different species.

#### ***Priority***

Applicants claim priority to provisional application 60/432,122 under 35 USC 119(e). After a review of this document Examiner considers this document to support, *inter alia*, a device of a nanocrystalline silicon containing a plurality of pores and a solid state oxidant disposed within the pores, the solid state oxidant being gadolinium nitrate; and, a method of using the device for measuring emission spectra of target analytes. Not supported are solid state oxidants that are nitrates other than gadolinium nitrate.

*Claim Objections*

Claim 3 is objected to because of the following informality:

Claim 3 depends upon "claim 3" which is improper. Examiner considers claim 3 to depend upon claim 2.

Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 8, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Simpson et al. (US 6,666,935 B1).

As to claims 1, 2, and 8, Simpson et al. discloses an initiator explosive device (abstract) for detonating a second explosive (capable of this use) comprising a nanocrystalline silicon containing a plurality of pores ("silica matrix" of col. 7 lines 23-26; col. 5 lines 35-40); and, a solid state oxidant ("PETN" of col. 7 lines 45-50) disposed within the pores (col. 7 lines 45-50).

As to claim 9, Simpson et al. further discloses the oxidant baked into the pores (from col. 7, lines 52-57).

Claims 1-3 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Hofmann et al. (US 6,984,274 B2).

As to claims 1-3, Hofmann et al. disclose an initiator explosive device (abstract) for detonating a second explosive (capable of this use) comprising a nanocrystalline silicon

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containing a plurality of pores (col. 3 lines 43-68); and, a solid state oxidant of sodium, potassium, or ammonium nitrate (col. 4 lines 40-49) disposed within the pores (col. 5 lines 7-10).

As to claim 9, Simpson et al. further discloses the oxidant baked into the pores (from col. 3, lines 43-68).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being obvious over Simpson et al. (US 6,666,935 B1) in view of Aubert (US 4,705,582).

As to claim 3, the limitations of claim 2 are disclosed as described above. Not disclosed is the nitrate being potassium or ammonium nitrate. Aubert, however, discloses the substitution of PETN with potassium or ammonium nitrate (col. 2 lines 27-37). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Simpson et al. by using potassium or ammonium nitrate instead of PETN as disclosed by Aubert depending upon oxygen balance of the reaction and sensitivity needed for the explosion.

Claim 11 is rejected under 35 U.S.C. 103(a) as being obvious over Simpson et al. (US 6,666,935 B1).

As to claim 11, the limitations of claim 1 are disclosed as described above. Not disclosed is the nanocrystalline silicon being a thin film. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Simpson et al. by making into a thin film depending upon use of the device.

#### *Allowable Subject Matter*

Claims 14, 15, 17-26 are allowed.

#### *Conclusion*

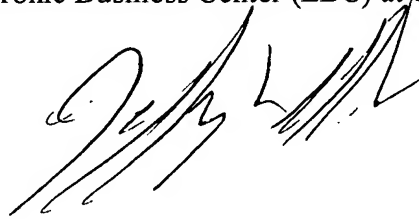
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Diener et al. and Way disclose in the prior art various porous explosive devices. Griffith et al. disclose in the art the concept that oxidizing and sensitizing agents are interchangeable depending upon sensitivity of the explosion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Gellner whose telephone number is 571.272.6887. The examiner can normally be reached on Monday-Friday, 8:30-4:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on 571.272.6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Jeffrey L. Gellner', is positioned to the left of the printed name.

Jeffrey L. Gellner  
Primary Examiner  
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